

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 2004/007291

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12P35/04 C07D501/00 C12N9/84 C12N11/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12P C07D C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97/04086 A (GIST BROCADES BV ; VROOM ERIK DE (NL)) 6 February 1997 (1997-02-06) cited in the application claims 6-9; example 4; tables 4.1,4.2 -----	1-11, 14-18,31
X	US 4 073 687 A (KONDO EIJI ET AL) 14 February 1978 (1978-02-14) claim 1; example 7 -----	1-9, 14-18,31
X	WO 99/24441 A (HEITMANN HERWARDT ; VROOM ERIK DE (NL); GIST BROCADES BV (NL); ROY PET) 20 May 1999 (1999-05-20) page 4, line 28 - page 5, line 4; claims 1,4,5,7,13 ----- -/-	1-4,19, 20, 23-26,30

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

12 January 2005

Date of mailing of the international search report

117.03.05

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Jenn, T

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/007291

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/56944 A (VROOM ERIK DE ; WILMS JOHANNES (NL); GIST BROCADES BV (NL)) 17 December 1998 (1998-12-17) abstract; claims 1,2 page 1, line 20 - line 25 page 2, line 2 page 4, line 9 - line 13 page 9, line 13 - line 14 page 11, line 29 - page 12, line 6 page 12, line 16 - line 23 page 21, line 27 - page 22, line 11	1-4, 8-11, 13-15, 18-20, 26,27, 29-31
X	WO 96/02663 A (GIST BROCADES BV ; CLAUSEN KIM (DK); DEKKERS ROCUS MARINUS (NL)) 1 February 1996 (1996-02-01) claims 1,9,14; table 2 page 7, line 19 page 7, line 29 - line 35 page 8, line 24 - page 9, line 20 page 9, line 24 - line 33	1-4, 6-11, 13-17
X	WO 99/31109 A (DSM NV ; GELDER RENE DE (NL); KEMPERMAN GERJAN (NL); RAEMAKERS FRANKEN) 24 June 1999 (1999-06-24) page 1, line 27 - line 32; claims 1,3 page 4, line 25 - line 32 page 5, line 1 - line 7 page 5, line 23 - line 29 page 6, line 28 - line 31	1-4, 6-17,21
Y	US 5 034 522 A (SCHREIBER FRED G) 23 July 1991 (1991-07-23) abstract; claims 1,3,11,13; example 5 column 4, line 49 - line 62 column 6, line 20 - line 25 column 6, line 56 - line 60	19,20, 24-31
Y	US 3 819 620 A (DUERSCH F ET AL) 25 June 1974 (1974-06-25) column 3, line 64 - column 4, line 75; claims 1,2	19,20, 24-31
Y	US 3 485 819 A (BACH GEORGES GUSTAV ET AL) 23 December 1969 (1969-12-23) claim 4; examples 1,5	19,20, 25,26
A	EP 0 997 199 A (DSM NV) 3 May 2000 (2000-05-03) page 4, line 35 - line 36; claims 1,11 page 5, line 38 - line 39 page 5, line 54 - line 55	1-31
	-/--	

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/007291

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03/055998 A (ALKEMA WYNAND BERNLEF LIUDGER ; BOESTEN WILHELMUS H J (NL); DOOREN VAN) 10 July 2003 (2003-07-10) cited in the application abstract; claims 5-8; examples A,2,3,C page 2, line 9 page 2, line 21 page 10, line 12 - line 13 page 10, line 17 page 10, line 20 - line 32	1-4,6-18
X	WO 91/00865 A (GEMA SA) 24 January 1991 (1991-01-24) claims 5,7 page 3, line 34 - page 4, line 6 page 4, line 29 - line 31 page 5, line 5 - line 25	24,25, 29,31
P,X	WO 03/055892 A1 (DSM N.V., NETH.) 10 July 2003 (2003-07-10) page 5, line 12 - line 15; claims 12,15 page 6, line 24 - line 25	24,25, 29,31

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/007291

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-31
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/007291

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9704086	A	06-02-1997	AU 6659296 A CN 1190990 A WO 9704086 A1 EP 0839192 A1 JP 2001527381 T US 6060268 A	18-02-1997 19-08-1998 06-02-1997 06-05-1998 25-12-2001 09-05-2000
US 4073687	A	14-02-1978	JP 51133488 A CA 1049431 A1 CH 629534 A5 DE 2621618 A1 FR 2310757 A1 GB 1544844 A NL 7605138 A	19-11-1976 27-02-1979 30-04-1982 25-11-1976 10-12-1976 25-04-1979 16-11-1976
WO 9924441	A	20-05-1999	AU 1234999 A WO 9924441 A1	31-05-1999 20-05-1999
WO 9856944	A	17-12-1998	AU 8021398 A WO 9856944 A1	30-12-1998 17-12-1998
WO 9602663	A	01-02-1996	AT 185842 T AU 3163295 A CN 1152945 A ,B DE 69512917 D1 WO 9602663 A1 EP 0771357 A1 ES 2139923 T3 US 6048708 A	15-11-1999 16-02-1996 25-06-1997 25-11-1999 01-02-1996 07-05-1997 16-02-2000 11-04-2000
WO 9931109	A	24-06-1999	NL 1007828 C2 AU 1786299 A WO 9931109 A1	21-06-1999 05-07-1999 24-06-1999
US 5034522	A	23-07-1991	NONE	
US 3819620	A	25-06-1974	AR 196669 A1 AT 322740 B AU 475833 B2 AU 5507473 A BE 800373 A1 CA 1004220 A1 CH 582185 A5 CS 178428 B2 DD 106181 A5 DE 2326880 A1 EG 11139 A ES 415420 A1 FI 57952 B FR 2186234 A1 GB 1426266 A HU 167052 B IE 38750 B1 IL 42243 A IN 138787 A1 IT 1068202 B JP 1050918 C JP 49041520 A	12-02-1974 10-06-1975 02-09-1976 07-11-1974 03-12-1973 25-01-1977 30-11-1976 15-09-1977 05-06-1974 20-12-1973 29-03-1978 16-02-1976 31-07-1980 11-01-1974 25-02-1976 28-07-1975 24-05-1978 15-10-1975 27-03-1976 21-03-1985 26-06-1981 18-04-1974

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/007291

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3819620	A		JP 55044754 B KR 8201606 A NL 7307321 A , C NO 144849 B PL 87262 B1 RO 63443 A1 RO 68286 A1 SE 409714 B SU 465793 A3 US 3928591 A ZA 7302889 A	13-11-1980 08-09-1982 04-12-1973 17-08-1981 30-06-1976 15-07-1978 30-12-1980 03-09-1979 30-03-1975 23-12-1975 24-04-1974
US 3485819	A	23-12-1969	AT 301020 B BE 735536 A BG 17331 A3 BG 17811 A3 CH 518977 A CS 157672 B2 DE 1931722 A1 DE 1967020 A1 DK 131728 B ES 369005 A1 FI 52093 B FR 2012156 A5 GB 1276314 A IE 32888 B1 IL 32411 A IT 1052126 B MY 27973 A NL 6910123 A , B NO 134913 B PL 80099 B1 SE 383887 B SE 397532 B YU 124379 A1 YU 169669 A , B	25-08-1972 02-01-1970 25-07-1973 25-12-1973 15-02-1972 16-09-1974 08-01-1970 29-04-1976 25-08-1975 16-07-1971 28-02-1977 13-03-1970 01-06-1972 09-01-1974 14-01-1974 20-06-1981 31-12-1973 06-01-1970 27-09-1976 30-08-1975 05-04-1976 07-11-1977 31-10-1982 31-10-1979
EP 0997199	A	03-05-2000	EP 0997199 A1	03-05-2000
WO 03055998	A	10-07-2003	BR 0215329 A WO 03055998 A2 EP 1456370 A2	16-11-2004 10-07-2003 15-09-2004
WO 9100865	A	24-01-1991	AT 112780 T DE 69013305 D1 DE 69013305 T2 DK 433428 T3 WO 9100865 A1 EP 0433428 A1 ES 2023560 A6 ES 2063974 T3 JP 8009630 B JP 4500819 T US 5278157 A	15-10-1994 17-11-1994 18-05-1995 05-12-1994 24-01-1991 26-06-1991 16-01-1992 16-01-1995 31-01-1996 13-02-1992 11-01-1994
WO 03055892	A1	10-07-2003	EP 1458727 A1	22-09-2004